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Precedence: Bulk  
Subject: Info-Hams Digest V93 #650  
To: Info-Hams

Info-Hams Digest                      Thu, 27 May 93                      Volume 93 : Issue    650

Today's Topics:

    2nd CFV and VOTE ACK: rec.radio.amateur reorganization  
        Can non-ve still give novice test?  
        VCO design questions  
    Weekly Solar Terrestrial Forecast & Review for 28 May

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 27 May 1993 18:17:39 -0400  
From: bounce-back@uunet.uu.net  
Subject: 2nd CFV and VOTE ACK: rec.radio.amateur reorganization  
To: info-hams@ucsd.edu

                    2ND CALL FOR VOTES  
            AND VOTE ACK  
            REC.RADIO.AMATEUR REORGANIZATION

This is the 2nd official Call for Votes for the reorganization of the  
rec.radio.amateur hierarchy of newsgroups. The first CFV was posted May 10th.  
This vote is being conducted according to the official newsgroup creation  
procedures, which are posted regularly in news.groups.

Votes may be cast only with the simple fill-in-the-blanks form which appears  
in the "HOW TO CAST YOUR VOTE" section later in this CFV.

An acknowledgement for votes received ("vote ack") is included near the end  
of this article.

SUBJECT OF VOTE

-----

All of the newsgroups proposed below are UNMODERATED.

rec.radio.amateur.digital.misc

amateur packet radio, RTTY, AMTOR, Clover and other digital amateur radio modes (This replaces rec.radio.amateur.packet and adds other digital modes to the subject)

rec.radio.amateur.digital.tcp-ip

TCP/IP via amateur packet radio

rec.radio.amateur.dx

DX (long distance) amateur radio communications

rec.radio.amateur.antenna

amateur radio antennas: theory, techniques and construction

rec.radio.amateur.equipment

amateur radio equipment: manufactured products and modifications

rec.radio.amateur.instruction

amateur radio instruction & examination

rec.radio.amateur.operating

amateur radio operating procedures and techniques

rec.radio.amateur.homebrew

amateur radio construction & experimentation

rec.radio.amateur.space

amateur radio in space: amateur radio satellites, earth-moon-earth (EME) communications, space shuttle, MIR space station, etc.

rec.radio.amateur.emerg-services

emergency services: RACES, ARES, NTS, and other use of amateur radio in emergencies or disasters

rec.radio.amateur.rdf

radio direction finding: recreational hunts and searches for interference

Two existing newsgroups will not be affected by this vote. They are rec.radio.amateur.misc and rec.radio.amateur.policy. They do not appear on the voting form and no changes resulting from this procedure will apply to them. rec.radio.amateur.digital.misc will replace rec.radio.amateur.packet if

it passes, otherwise rec.radio.amateur.packet will remain unchanged.

#### DURATION OF VOTE

-----  
Voting commenced when the 1st official CFV was posted on 10 May 1993. It will continue until 9 June 1993 at 23:59PM UTC.

Voting procedures are detailed in the next section, "HOW TO CAST YOUR VOTE."

Upon completion of the voting period, the results will be posted to news.announce.newgroups, news.groups, rec.radio.info and all the current rec.radio.amateur.\* newsgroups. In order to pass, newsgroups must have at least a 2/3 majority of YES votes and at least 100 more YES than NO votes.

#### HOW TO CAST YOUR VOTE

-----  
Jay Maynard, K5ZC, is serving as vote-taker for this vote. Please REPLY to this message via MAIL to his account, jmaynard@oac.hsc.uth.tmc.edu; using your newsreader's "mail a reply" command on this message should work. Posted votes can not be counted. You will receive a reply within a few days after your votes are received which indicates how the vote counting software thinks you voted - please mail corrections immediately.

PLEASE USE THE FORM AS IT IS. The vote-taker requests that voters cut out the rest of the CFV besides the form from their replies so the saved votes won't take so much storage.

Please do not delete anything between the "-==--==" lines - and most certainly do not modify the group names. Votes will be tallied by an automatic program and if it can't determine your vote you will be asked to re-vote.

For each group that you wish to vote on, simply add your vote in the appropriate space on the same line. Recognized votes are Yes, No, For, and Against. Yes and For are equivalent, as are No and Against. Capitalization is not important. If you want to abstain from voting on a particular group, just leave the space blank. Don't worry about spacing of the columns or any quote characters ">" that your reply inserts.

You may NOT do a combined vote - i.e., "I vote for all of them" or "I vote against all of them." Please use the form.

You may only vote once, regardless of how many accounts you may have. Forwarded or proxy votes are invalid.

Reminder - don't delete anything between the lines below. But please remove the rest of the CFV from your reply.

----- Don't Delete Anything Between These Lines -----

rec.radio.amateur reorganization Ballot [RRAR0002]

Your Vote Group

-----  
yes           this.is.an.example.group  
>no           this.is.another.example.group  
              this.is.an.example.abstention  
  
              rec.radio.amateur.digital.misc  
              rec.radio.amateur.digital.tcp-ip  
              rec.radio.amateur.dx  
              rec.radio.amateur.antenna  
              rec.radio.amateur.equipment  
              rec.radio.amateur.instruction  
              rec.radio.amateur.operating  
              rec.radio.amateur.homebrew  
              rec.radio.amateur.space  
              rec.radio.amateur.emerg-services  
              rec.radio.amateur.rdf

----- Don't Delete Anything Between These Lines -----

#### VOTE ACKNOWLEDGEMENT

-----  
The following mass vote acknowledgement is provided in case anyone who cast a vote did not receive the e-mail acknowledgement. This is only to confirm that a vote was received. The voting results are not currently available and will not be until after the voting period ends (see above.)

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## REFERENCES



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For more information on the newsgroup creation procedures, refer to the article "Guidelines for UseNet Newsgroup Creation" in news.groups, news.announce.newgroups and news.answers. It includes the requirements behind the rules in this CFV including, for example, voting by mail only, the allowed length of the voting period, required margins to pass, prohibition against proxy, forwarded, or conditional votes, etc.

For a complete transcript of the decision-making process that led up to the Request for Discussion and Call for Votes for the rec.radio.amateur reorganization, anonymous FTP to charon.amdahl.com and obtain the files called /pub/radio/amateur/news.groups-discussion.Z  
/pub/radio/amateur/rra-reorg.log.\*.Z

The newsgroups on this CFV were the result of the 30-day discussion period that followed the Request for Discussion (which was posted March 25, 1993.)

The rra-reorg mail list was the forum for developing the RFD and for turning the results of the discussion on news.groups into this CFV. The mail list was advertised several times on the rec.radio.amateur.\* newsgroups. The following people chose to join and assisted in putting together the proposal:

ben@nj8j.atl.ga.us (Ben Coleman NJ8J)  
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Date: 27 May 1993 21:01:06 GMT  
From: topaz.bds.com!topaz.bds.com!ron@uunet.uu.net  
Subject: Can non-ve still give novice test?  
To: info-hams@ucsd.edu

> In a recent posting someone mentioned that until recently General  
> and above could give Novice tests.

I think the cut off is July 3.

-----  
Date: 27 May 1993 21:34:37 GMT  
From: usc!howland.reston.ans.net!darwin.sura.net!news-feed-1.peachnet.edu!concert!  
samba.oit.unc.edu!cheech@network.UCSD.EDU  
Subject: VCO design questions  
To: info-hams@ucsd.edu

Greetings,

I have a couple of (simple-minded?) questions about VCO design for PLL synthesizers. Since the Engineering library is an hour away and you can buy a lot of parts for the cost of one specialist publication, I'm asking the group for information.

- 1) Many of the PLL designs that I see use a common-gate FET oscillator for the VCO. The reason given is that the phase noise is lower for this configuration. No one explains why the common-gate oscillator exhibits lower phase noise. Can anyone enlighten me?
- 2) I haven't found a discussion of common-gate oscillator design in my (not that large) set of references. Is it so simple everyone else knows how to do it? More enlightenment, please.
- 3) Most of the VCO designs use varactors in a back-to-back setup, paralleling pairs of back-to-back varactors to get higher capacitance. What am I missing here? Does this contribute to stability or is there another reason for it?

All information will be appreciated. Suggestions for specific books or articles to read will make life easier if I have to make a trip to the engineering library. A good explanation may save me a trip to the library.

Thanks,

Greg AC4YT

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Date: 27 May 93 22:41:16 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Weekly Solar Terrestrial Forecast & Review for 28 May  
To: info-hams@ucsd.edu

--- SOLAR TERRESTRIAL FORECAST AND REVIEW ---  
May 28 to June 06, 1993

Report Released by Solar Terrestrial Dispatch  
P.O. Box 357, Stirling, Alberta, Canada  
T0K 2E0  
Accessible BBS System: (403) 756-3008

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SOLAR AND GEOPHYSICAL ACTIVITY FORECASTS AT A GLANCE

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10-DAY SOLAR/RADIO/MAGNETIC/AURORAL ACTIVITY OUTLOOK

	10.7 cm	HF Propagation +/- CON							SID				AU.BKSR DX				Mag	Aurora			
	SolrFlx	LO	MI	HI	PO	SWF	%MUF	%	ENH	LO	MI	HI	LO	MI	HI	%	K	Ap	LO	MI	HI
--	-----	-----							-----				-----				----	-----			
28	120	G	G	P	P	40	-25	70	35	NA	NA	NA	03	25	40	30	5	25	NV	LO	MO
29	125	G	G	P	P	40	-25	65	35	NA	NA	NA	03	20	35	30	4	20	NV	LO	MO
30	125	G	G	F	F	50	-20	65	40	NA	NA	NA	02	15	30	30	3	15	NV	LO	MO
31	130	G	G	F	F	50	-15	65	40	NA	NA	NA	02	10	25	35	3	15	NV	NV	LO
01	130	VG	G	F	F	50	-10	65	40	NA	NA	NA	02	10	25	35	3	12	NV	NV	LO
02	130	VG	VG	G	G	50	00	65	40	NA	NA	NA	02	10	25	35	2	10	NV	NV	LO
03	135	VG	VG	G	G	50	+05	65	40	NA	NA	NA	02	10	25	40	2	08	NV	NV	LO
04	135	VG	VG	F	F	50	00	65	40	NA	NA	NA	02	15	30	40	3	12	NV	NV	LO
05	135	G	G	P	P	50	-10	65	40	NA	NA	NA	03	25	40	35	4	18	NV	NV	MO
06	130	G	G	F	F	50	-10	65	40	NA	NA	NA	02	20	35	35	4	15	NV	NV	LO

DEFINITIONS:

Date (day only)

10.7 cm SOLAR radio FLUX forecast

HF Propagation Conditions for LOW, MIDDLE, HIGH, and POLAR areas (see below)

HF Short Wave Fade Probability (in %)

HF Maximum Usable Frequency in +/- percent above seasonal normals.

HF Prediction CONFIDENCE Level (in %)

VHF Sudden Ionospheric ENHancement Probs (in %), weighted for low-mid lats

PROBability of "s"poradic E (Es) during the UT day for low, mid and high lats

VHF AUroral BackScatter Probs (in %) for LOW, MIDDLE and HIGH Latitudes

VHF Overall Global DX Potential (in %) - weighted for Low and Middle latitudes

Geomagnetic Activity Kp Index (peak value - see below)

GeoMAGnetic Activity Ap Index (peak value - see below)

AURORAL Activity for LOW, MIDDLE and HIGH Latitudes (see below)

HF Prop. Quality rated as: EG=Extremely Good, VG=Very Good, G=Good, F=Fair,  
P=Poor, VP=Very Poor, EP=Extremely Poor.

Probability of Sporadic E (Es) for the various latitudes is given in percent.

Kp Planetary Index rated: 0=V.Quiet, 1=Quiet, 2=Unstld, 3=Active, 4=V.Active, 5=Minor Storm, 6=Major Storm, 7=Maj-Sev Storm, 8=Severe Storm, 9=V.Severe.  
 Ap Planetary Index rated: 0-7=Quiet, 8-16=Unstld, 17-29=Active, 30-49=Minor Storm, 50-99=Major Storm, Severe Storm >=100.  
 Auroral Activity rated: NV=Not Visible, LO=Low, MO=Moderate, HI=High, VH=Very High.

# PEAK PLANETARY 10-DAY GEOMAGNETIC ACTIVITY OUTLOOK (28 MAY - 06 JUN)

EXTREMELY SEVERE												HIGH
VERY SEVERE STORM												HIGH
SEVERE STORM												MODERATE
MAJOR STORM												LOW - MOD.
MINOR STORM	*											LOW
VERY ACTIVE	***	*								*		NONE
ACTIVE	***	***	**	*	*				*	***	**	NONE
UNSETTLED	***	***	***	***	***	***	**	***	***	***		NONE
QUIET	***	***	***	***	***	***	***	***	***	***	***	NONE
VERY QUIET	***	***	***	***	***	***	***	***	***	***	***	NONE
-----												
Geomagnetic Field	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun		Anomaly
Conditions	Given in 8-hour UT intervals											Intensity

CONFIDENCE LEVEL: 70%

## NOTES:

Predicted geomagnetic activity is based heavily on recurrent phenomena. Transient energetic solar events cannot be predicted reliably over periods in excess of several days. Hence, there may be some deviations from the predictions due to the unpredictable transient solar component.

## 60-DAY GRAPHICAL ANALYSIS OF GEOMAGNETIC ACTIVITY

102		S										
97		S										
92		S										
87		S										
82		S										
77		S										
71		S										
66		S										
61		S										
56		S										
51		S										

46		S						J		
41		S						J		
36		S						MMJ		
31		MS		M				MMJ		
26		MS		M A		A		MMJ		
20		MS		MAA		AA		MMJ		
15		AA	MS	AAA	MAA	A	AAA	AMMJ	A A	
10		UAA	MSU	UAAA	UAAU	AUAAA	U U	AMMJ	U AUUA	U
5		UAAUU	MSU	UAAAAU	UAAUU	AUAAAAUUUU	UUUUUUQUU	AMMJUUUU	AUUUUUU	
0		UAAUUUQ	MSU	UAAAAU	UAAUU	AUAAAAUUUU	QQUUUUUUQUU	AMMJUUUU	AUUUUUU	QQQQQQ

Chart Start Date: Day #087

#### NOTES:

This graph is determined by plotting the greater of either the planetary A-index or the Boulder A-index. Graph lines are labelled according to the severity of the activity which occurred on each day. The left-hand column represents the associated A-Index for that day.

Q = Quiet, U = Unsettled, A = Active, M = Minor Storm,

J = Major Storm, and S = Severe Storm.

#### CUMULATIVE GRAPHICAL CHART OF THE 10.7 CM SOLAR RADIO FLUX

146										
143		*								
140		*								
137		*								
134		**					*			
131		* **					* **			
128		****		*			*****			
125		* *****		**			*****			
122		** *****		****			*****			
119		*** *****		** *****			*****			
116		*****		*****			*****			
113		*****		*****			*****			
110		*****		*****			*****			
107		*****		*****			*****		*	
104		*****		*****			*****		*	
101		*****		*****			*****		*	
098		*****		*****			*****		***	
095		*****		*****			*****		****	
092		*****		*****			*****		*****	
089		*****		*****			*****			
086		*****		*****			*****			

Chart Start: Day #090

# GRAPHICAL ANALYSIS OF 90-DAY AVERAGE SOLAR FLUX

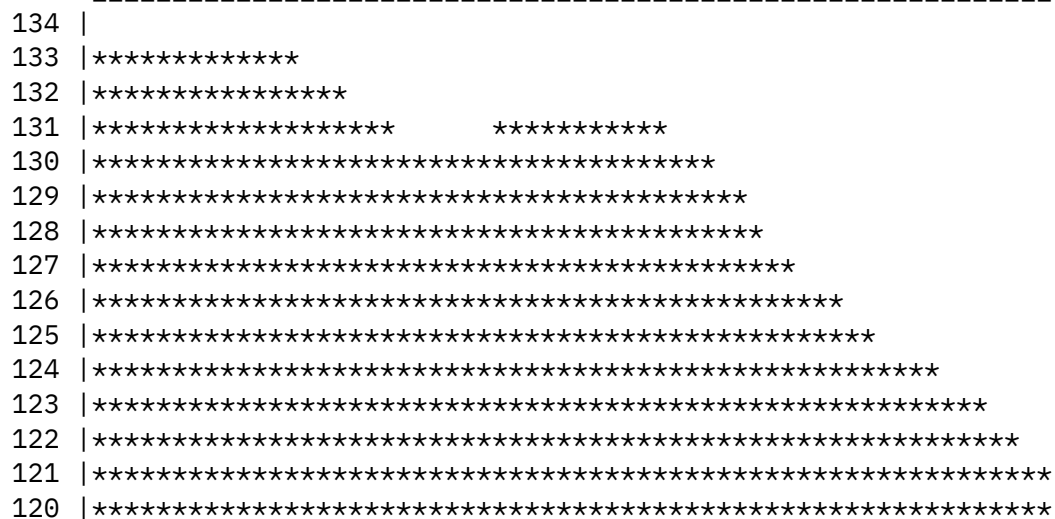


Chart Start: Day #090

## NOTES:

The 10.7 cm solar radio flux is plotted from data reported by the Penticton Radio Observatory (formerly the ARO from Ottawa). High solar flux levels denote higher levels of activity and a greater number of sunspot groups on the Sun. The 90-day mean solar flux graph is charted from the 90-day mean of the 10.7 cm solar radio flux.

# CUMULATIVE GRAPHICAL CHART OF SUNSPOT NUMBERS



```

102 | * * * ***          *          *          |
094 | *****          *          *          |
086 | *****          *          *          * |
078 | *****          *          *          * |
070 | *****          *          *          * |
062 | *****          *          *          * |
054 | *****          *          *          * |
046 | *****          *          *          * |
038 | *****          *          *          * |
030 | *****          *          *          * |
022 | *****          *          *          * |
014 | *****          *          *          * |
006 | *****          *          *          * |
-----

```

Chart Start: Day #090

#### NOTES:

The graphical chart of sunspot numbers is created from the daily sunspot number counts as reported by the SESC.

#### HF RADIO SIGNAL PROPAGATION PREDICTIONS (28 MAY - 06 JUN)

##### High Latitude Paths

CONFIDENCE LEVEL ----- 65%	EXTREMELY GOOD												
	VERY GOOD												
	GOOD							*	*				
	FAIR	**	**	***	***	***	*	*	*	*	***	**	***
	POOR	*	*									*	
	VERY POOR												
	EXTREMELY POOR												
-----													
PROPAGATION QUALITY		Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
		Given in 8 Local-Hour Intervals											
-----													

##### Middle Latitude Paths

CONFIDENCE LEVEL ----- 65%	EXTREMELY GOOD												
	VERY GOOD						*	*	*				
	GOOD	**	**	***	***	***	* *	* *	* *	***	***		
	FAIR	*	*										
	POOR												
	VERY POOR												
	EXTREMELY POOR												
-----													
PROPAGATION		Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun		





# MIDDLE LATITUDES

FORECAST	Given in 8 hour local time intervals										SWF/SID ENHANCEMENT										
CONFIDENCE	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	F	S	S	M	T	W	T	F	S	S	
-----	---	---	---	---	---	---	---	---	---	---	-	-	-	-	-	-	-	-	-	-	
0%	***	***	***	***	***	***	***	***	***	***	0%	*	*	*	*	*	*	*	*	*	
20%	***	***	***	***	***	***	***	***	***	***	20%	*	*	*	*	*	*	*	*	*	
40%	***	***	***	***	***	***	***	***	***	***	40%	*	*	*	*	*	*	*	*	*	
60%	***	***	***	***	***	***	***	***	***	***	60%	*	*		*	*					
80%											80%										
100%											100%										
=====	===	===	===	===	===	===	===	===	===	===		-----									
100%											100%										
80%											80%										
60%											60%										
40%	*	*	*	**	**	***	***	***	*	**	40%										
20%	***	***	***	***	***	***	***	***	***	***	20%	*	*	*					*		
0%	***	***	***	***	***	***	***	***	***	***	0%	*	*	*	*	*	*	*	*	*	
-----	---	---	---	---	---	---	---	---	---	---		-	-	-	-	-	-	-	-	-	
CHANCE OF	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	F	S	S	M	T	W	T	F	S	S	
VHF DX	Given in 8 hour local time intervals										AURORAL BACKSCATTER										

# LOW LATITUDES

FORECAST   Given in 8 hour local time intervals											SWF/SID ENHANCEMENT										
CONFIDENCE	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	F	S	S	M	T	W	T	F	S	S	
-----	---	---	---	---	---	---	---	---	---	---	-	-	-	-	-	-	-	-	-	-	
0%	***	***	***	***	***	***	***	***	***	***	0%	*	*	*	*	*	*	*	*	*	
20%	***	***	***	***	***	***	***	***	***	***	20%	*	*	*	*	*	*	*	*	*	
40%	***	***	***	***	***	***	***	***	***	***	40%	*	*	*	*	*	*	*	*	*	
60%	***	***	***	***	***	***	***	***	***	***	60%	*	*		*		*				
80%											80%										
100%											100%										
=====	===	===	===	===	===	===	===	===	===	===		-----									
100%											100%										
80%											80%										
60%	*	*	*	*	*	**	**	**	*	*	60%										
40%	***	***	***	***	***	***	***	***	***	***	40%										
20%	***	***	***	***	***	***	***	***	***	***	20%										
0%	***	***	***	***	***	***	***	***	***	***	0%	*	*	*	*	*	*	*	*	*	
-----	---	---	---	---	---	---	---	---	---	---		-	-	-	-	-	-	-	-	-	
CHANCE OF	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	F	S	S	M	T	W	T	F	S	S	
VHF DX	Given in 8 hour local time intervals										AURORAL BACKSCATTER										

These VHF DX prediction charts are defined for the 30 MHz to 220 MHz bands. They are based primarily on phenomena which can affect VHF DX propagation globally. They should be used only as a guide to potential DX conditions on VHF bands. Latitudinal boundaries are the same as those for the HF predictions charts.

## High Latitude Locations

## Middle Latitude Locations

## Low Latitude Locations

CONFIDENCE LEVEL ----- 75%	EXTREMELY HIGH											
	VERY HIGH											
	HIGH											
	MODERATE											
	LOW											
	NOT VISIBLE	***	***	***	***	***	***	***	***	***	***	***
	-----	---	---	---	---	---	---	---	---	---	---	---
	AURORAL	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	
	INTENSITY	Eve.Twilight/Midnight/Morn.Twilight										

NOTE:

A Dynamic Auroral Oval Simulation and Prediction Software Package is available to help make predictions and show the locations where auroral activity should be visible from the ground. For more information regarding this software, contact: "Oler@Rho.Uleth.CA", or "COler@Solar.Stanford.Edu".

For more information regarding these charts, send a request for the document, "Understanding Solar Terrestrial Reports" to: "Oler@Rho.Uleth.Ca" or to: "COler@Solar.Stanford.Edu". This document, as well as others and related data/forecasts exist on the STD BBS at: (403) 756-3008.

\*\* End of Report \*\*

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Date: 27 May 1993 18:42:49 GMT  
From: topaz.bds.com!topaz.bds.com!ron@uunet.uu.net  
To: info-hams@ucsd.edu

References <1515@arrl.org>, <C7p06r.K9y@ucdavis.edu>, <1u2st2\$2q9@cville-srv.wam.umd.edu>et  
Subject : Re: Question: Can a novice take the extra test?

> they shouldn't even be charged in the first place, as (I say again)  
> THE NOVICE TEST IS STILL DEFINED AS A FREE EXAM

The latest VE newsletter from the ARRL-VEC says not to charge for people who want 1A and 2 only (because they are only going for novice) or 1A for people wishing to add code to a Technician.

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End of Info-Hams Digest V93 #650

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